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<212> PRT
<213> Nicotiana tabacum

<400> 2

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Ile His Ser Glu Asn Gln Lys Glu Ser Glu Phe Cys Ser Arg Arg Thr
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Ile Leu Phe Val Gly Phe Ser Val Leu Pro Leu Leu Ser Leu Arg Ala
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Asn Ala Phe Glu Gly Leu Ser Val Asp Ser Gln Val Lys Ala Gln Pro
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Gln Lys Glu Glu Thr Glu Gln Thr Ile Gln Gly Asn Ala Glu Asn Pro
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Ala Ser Asp Ala Lys Leu Leu Gly Glu Gln Glu Lys Arg Leu His Gln
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Leu Glu Glu Gln Leu Gly Thr Ala Ser Asp Glu Val Arg Lys Asn Asn
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Val Leu Ile Ala Asp Leu Thr Gln Glu Lys Glu Asn Leu Arg Arg Met
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Leu Asp Ala Glu Leu Glu Asn Ile Ser Lys Leu Lys Leu Glu Val Gln
420 425 430

Val Thr Gln Glu Thr Leu Glu Lys Ser Arg Ser Asp Ala Ser Asp Ile
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Ala Gln Gln Leu Gln Gln Ser Arg His Leu Cys Ser Lys Leu Glu Ala
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Glu Val Ser Lys Leu Gln Met Glu Leu Glu Glu Thr Arg Thr Ser Leu
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Leu Gln Thr Glu Leu Val Asp Val Tyr Lys Lys Ala Glu Arg Ala Ala
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Leu Thr Phe Leu Glu Ala Gln Ile Thr Arg Glu Lys Glu Ser Arg Lys
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Asn Leu Glu Glu Glu Leu Glu Arg Ala Thr Glu Ser Leu Asp Glu Met
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Asn Arg Asn Ala Phe Ala Leu Ala Lys Glu Leu Glu Leu Ala Asn Ser
595 600 605

His Ile Ser Ser Leu Glu Asp Glu Arg Glu Val Leu Gln Lys Ser Val
610 615 620

Ser Glu Gln Lys Gln Ile Ser Gln Glu Ser Arg Glu Asn Leu Glu Asp
625 630 635 640

Ala His Ser Leu Val Met Lys Leu Gly Lys Glu Arg Glu Ser Leu Glu
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Lys Arg Ala Lys Lys Leu Glu Asp Glu Met Ala Ser Ala Lys Gly Glu
660 665 670

Leu Arg Leu Arg Thr Gln Val Asn Ser Val Lys Ala Pro Val Asn Asn
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<212> DNA
<213> Nicotiana tabacum

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35 40 45

Lys Leu Leu Gly Glu Gln Glu Lys Arg Leu His Gln Leu Glu Glu Gln
50 55 60

Leu Gly Thr Ala Val Ser Glu Val Arg Lys Asn Lys Val Leu Ile Ala
65 70 75 80

Asn Leu Thr Gln Ala Lys Glu Asn Leu Arg Arg Met Leu Asp Ala Glu
85 90 95

Leu Glu Asn Val Ser Lys Leu Lys Leu Glu Val Gln Val Thr Gln Glu
100 105 110

Thr Leu Glu Lys Ser Arg Ser Glu Ala Ser Asp Ile Val Glu Gln Leu
115 120 125

Gln Gln Ser Arg His Leu Cys Ser Lys Leu Glu Ala Glu Val Ser Lys
130 135 140

Leu Gln Met Glu Leu Glu Glu Thr Arg Thr Leu Leu Gln Lys Asn Ile
145 150 155 160

Asp Glu Thr Lys Arg Gly Ala Glu Leu Leu Ala Ala Glu Leu Thr Thr
165 170 175

Thr Arg Glu Leu Leu Lys Lys Thr Asn Glu Glu Met His Thr Ile Ser
180 185 190

Asn Glu Leu Ala Ala Val Thr Glu Asn Arg Asp Asn Leu Gln Thr Glu
195 200 205

Leu Val Asp Val Tyr Lys Lys Ala Glu Arg Ala Val Asn Glu Leu Lys
210 215 220

Gln Glu Lys Asn Ile Val Val Thr Leu Glu Lys Glu Leu Thr Phe Leu
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Glu Ala Gln Ile Thr Arg Glu Lys Glu Ser Pro Lys Asn Leu Glu Glu
245 250 255

Glu Leu Glu Arg Ala Thr Glu Ser Leu Asp Glu Met Asn Arg Asn Ala
260 265 270

Phe Ala Leu Ala Lys Glu Leu Glu Leu Ala Asn Ser Arg Ile Ser Ser
275 280 285

Leu Lys Asp Glu Arg Glu Val Leu Gln Lys Ser Val Ser Glu Gln Lys
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Gln Ile Ser Gln Glu Ala Arg Glu Asn Leu Glu Asp Ala His Ser Leu
305 310 315 320

Val Met Lys Leu Gly Lys Glu Arg Glu Ser Leu Glu Lys Arg Ala Lys
325 330 335

Lys Leu Glu Asp Glu Met Ala Ser Ala Lys Gly Glu Ile Leu Arg Leu
340 345 350

Arg Thr Gln Val Asn Ser Val Lys Ala Pro Val Asn Lys Glu Glu Lys
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<212> PRT
<213> Lycopersicon esculentum

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35 40 45

Asp Met Tyr Gln Gln Ser Gln Asp Gln Leu Met Asn Leu Thr Ser Glu
50 55 60

Ile Lys Glu Leu Lys Asp Glu Ile Gln Lys Arg Glu Arg Glu Leu Glu
65 70 75 80

Leu Lys Cys Val Ser Glu Asp Asn Leu Asn Val Gln Leu Asn Ser Leu
85 90 95

Leu Leu Glu Arg Asp Glu Ser Lys Lys Glu Leu His Ala Ile Gln Lys
100 105 110

Glu Tyr Ser Glu Phe Lys Ser Asn Ser Asp Glu Lys Val Ala Ser Asp
115 120 125

Ala Lys Leu Leu Gly Glu Gln Glu Lys Arg Leu His Gln Leu Glu Glu
130 135 140

Gln Leu Gly Thr Ala Leu Ser Glu Ala Ser Lys Asn Glu Val Leu Ile
145 150 155 160

Ala Asp Leu Thr Arg Glu Lys Glu Asn Leu Arg Arg Met Val Asp Ala
165 170 175

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180 185 190

Glu Ser Leu
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35 40 45

Leu Lys Gln Glu Lys Ser Ile Val Ala Thr Leu Glu Glu Glu Leu Lys
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Phe Leu Glu Ser Gln Ile Thr Arg Glu Lys Glu Leu Arg Lys Ser Leu
65 70 75 80

Glu Asp Glu Leu Glu Lys Ala Thr Glu Ser Leu Asp Glu Ile Asn Arg
85 90 95

Asn Val Leu Ala Leu Ala Glu Glu Leu Glu Leu Ala Thr Ser Arg Asn
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Ser Ser Leu Glu Asp Glu Arg Glu Val Leu Arg Gln Ser Val Ser Glu
115 120 125

Gln Lys Gln Ile Ser Gln Glu Ala Gln Glu Asn Leu Glu Asp Ala His
130 135 140

Ser Leu Val Met Lys Leu Gly Lys Glu Arg Glu Ser Leu Glu Lys Arg
145 150 155 160

Ala Lys Lys Leu Glu Asp Glu Met Ala Ala Ala Lys Gly Glu Ile Leu
165 170 175

Arg Leu Arg Ser Gln Ile Asn Ser Val Lys Ala Pro Val Glu Asp Glu
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<212> DNA
<213> Lycopersicon esculentum

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<213> Lycopersicon esculentum

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<212> DNA
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<212> DNA
<213> Nicotiana tabacum

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aaaaaaaaaa aa 912

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<212> DNA
<213> Nicotiana tabacum

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ttaatgaact gaaacaagaa aagaatattg tcgtgacatt ggagaaagag ctaacatttt 720
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<210> 14
<211> 1597
<212> DNA
<213> Nicotiana tabacum

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<210> 15
<211> 564
<212> DNA
<213> Nicotiana tabacum

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aagttgaagc tagaggtcca ggttactcag gaaactcttg agaaatctag aagtgatgct 180
tctgatatag cacaacaact acagcagtcg aggcatcttt gctctaagct tgaagctgag 240
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gagacaaaac gtggtgcaga gctcttagct gcggagctga ccactactag ggagcttcta 360
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tgtgataact tacagacgga gctagttgat gtctacaaga aagcagaacg tgctgctgat 480
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<210> 16
<211> 2154
<212> DNA
<213> Lycopersicon esculentum

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aagaaaacta ccaggagaag gaagagtgct actgttaagc aagaggaacc ctag 2154

<210> 17
<211> 717
<212> PRT
<213> Lycopersicon esculentum

<400> 17
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Cys Ser Ser Gln Phe Thr Pro Leu Leu Ser Cys Pro Arg Asn Thr Gln
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Ile Cys Arg Lys Lys Arg Pro Val Met Ala Ser Met His Ser Glu Asn
35 40 45

Gln Lys Glu Ser Asn Val Cys Asn Arg Arg Ser Ile Leu Phe Val Gly
50 55 60

Phe Ser Val Leu Pro Leu Leu Asn Leu Arg Ala Arg Ala Leu Glu Gly
65 70 75 80

Leu Ser Thr Asp Ser Gln Ala Gln Pro Gln Lys Glu Glu Thr Glu Gln
85 90 95

Thr Ile Gln Gly Ser Ala Gly Asn Pro Phe Val Ser Leu Leu Asn Gly
100 105 110

Leu Gly Val Val Gly Ser Gly Val Leu Gly Ser Leu Tyr Ala Leu Ala
115 120 125

Arg Asn Glu Lys Ala Val Ser Asp Ala Thr Ile Glu Ser Met Lys Asn
130 135 140

Lys Leu Lys Asp Lys Glu Asp Ala Phe Val Ser Met Lys Lys Gln Phe
145 150 155 160

Glu Ser Glu Leu Leu Ser Glu Arg Glu Asp Arg Asn Lys Leu Ile Arg
165 170 175

Arg Glu Gly Glu Glu Arg Gln Ala Leu Val Asn Gln Leu Lys Ser Ala
180 185 190

Lys Thr Thr Val Ile Ser Leu Gly Gln Glu Leu Gln Asn Glu Lys Lys
195 200 205

Leu Ala Glu Asp Leu Lys Phe Glu Ile Lys Gly Leu Gln Asn Asp Leu
210 215 220

Met Asn Thr Lys Glu Asp Lys Lys Lys Leu Gln Glu Glu Leu Lys Glu
225 230 235 240

Lys Leu Asp Leu Ile Gln Val Leu Glu Glu Lys Ile Thr Leu Leu Thr
245 250 255

Thr Glu Ile Lys Asp Lys Glu Val Ser Leu Arg Ser Asn Thr Ser Lys
260 265 270

Leu Ala Glu Lys Glu Ser Glu Val Asn Ser Leu Ser Asp Met Tyr Gln
275 280 285

Gln Ser Gln Asp Gln Leu Met Asn Leu Thr Ser Glu Ile Lys Glu Leu
290 295 300

Lys Asp Glu Ile Gln Lys Arg Glu Arg Glu Leu Glu Leu Lys Cys Val
305 310 315 320

Ser Glu Asp Asn Leu Asn Val Gln Leu Asn Ser Leu Leu Leu Glu Arg
325 330 335

Asp Glu Ser Lys Lys Glu Leu His Ala Ile Gln Lys Glu Tyr Ser Glu
340 345 350

Phe Lys Ser Asn Ser Asp Glu Lys Val Ala Ser Asp Ala Lys Leu Leu
355 360 365

Gly Glu Gln Glu Lys Arg Leu His Gln Leu Glu Glu Gln Leu Gly Thr
370 375 380

Ala Leu Ser Glu Ala Ser Lys Asn Glu Val Leu Ile Ala Asp Leu Thr
385 390 395 400

Arg Glu Lys Glu Asn Leu Arg Arg Met Val Asp Ala Glu Leu Asp Asn
405 410 415

Val Asn Lys Leu Lys Gln Glu Ile Glu Val Thr Gln Glu Ser Leu Glu
420 425 430

Asn Ser Arg Ser Glu Val Ser Asp Ile Thr Val Gln Leu Glu Gln Leu
435 440 445

Arg Asp Leu Cys Ser Lys Leu Glu Ala Glu Val Ser Lys Leu Gln Met
450 455 460

Glu Leu Glu Glu Thr Arg Ala Ser Leu Gln Arg Asn Ile Asp Glu Thr
465 470 475 480

Lys His Ser Ser Glu Leu Leu Ala Ala Glu Leu Thr Thr Thr Lys Glu
485 490 495

Leu Leu Lys Lys Thr Asn Glu Glu Met His Thr Met Ser Asp Glu Leu
500 505 510

Val Ala Val Ser Glu Asn Arg Asp Ser Leu Gln Thr Glu Leu Val Asp
515 520 525

Val Tyr Lys Lys Ala Glu His Thr Ala Asn Glu Leu Lys Gln Glu Lys
530 535 540

Ser Ile Val Ala Thr Leu Glu Glu Glu Leu Lys Phe Leu Glu Ser Gln
545 550 555 560

Ile Thr Arg Glu Lys Glu Leu Arg Lys Ser Leu Glu Asp Glu Leu Glu
565 570 575

Lys Ala Thr Glu Ser Leu Asp Glu Ile Asn Arg Asn Val Leu Ala Leu
580 585 590

Ala Glu Glu Leu Glu Leu Ala Thr Ser Arg Asn Ser Ser Leu Glu Asp
595 600 605

Glu Arg Glu Val Leu Arg Gln Ser Val Ser Glu Gln Lys Gln Ile Ser
610 615 620

Gln Glu Ala Gln Glu Asn Leu Glu Asp Ala His Ser Leu Val Met Lys
625 630 635 640

Leu Gly Lys Glu Arg Glu Ser Leu Glu Lys Arg Ala Lys Lys Leu Glu
645 650 655

Asp Glu Met Ala Ala Ala Lys Gly Glu Ile Leu Arg Leu Arg Ser Gln
660 665 670

Ile Asn Ser Val Lys Ala Pro Val Glu Asp Glu Glu Lys Val Val Ala
675 680 685

Gly Glu Lys Glu Lys Val Lys Ala Thr Val Thr Ala Lys Lys Thr Thr
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705 710 715

<210> 18
<211> 407
<212> DNA
<213> Nicotiana tabacum

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<211> 1491
<212> DNA
<213> Glycine max

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<210> 20
<211> 388
<212> PRT
<213> Glycine max

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Lys Ala Ala Leu Asp Ser Lys Val Leu Arg Glu Lys Glu Glu Glu Leu
20 25 30

His Gln Leu Lys Asp Gln Phe Glu Leu Ala Leu Gly Glu Ala Ser Lys
35 40 45

Ser Gln Ile Val Ile Ala Asp Leu Ser Gln Gln Arg Asp Asp Leu Lys
50 55 60

Glu Ala Leu Asp Asn Glu Ser Ser Lys Val Asn His Leu Lys Gln Glu
65 70 75 80

Leu Gln Val Thr Leu Glu Asn Leu Ala Lys Ser Arg Asn Glu Ser Ala
85 90 95

Glu Leu Glu Asn Leu Leu Thr Leu Ser Asn Lys Leu Cys Lys Glu Leu
100 105 110

Glu Leu Glu Val Ser Lys Leu Ser Ser Glu Leu Thr Glu Val Asn Glu
115 120 125

Ser Leu Gln Arg Asn Leu Asp Asp Ala Lys His Glu Ala Glu Met Leu
130 135 140

Ala Ser Glu Leu Thr Thr Ala Lys Glu His Leu Lys Glu Ala Gln Ala
145 150 155 160

Glu Leu Gln Gly Cys Gln Lys Asn Leu Thr Ala Ala Leu Glu Lys Asn
165 170 175

Asp Ser Leu Gln Lys Glu Leu Val Glu Val Tyr Lys Lys Ala Glu Ser
180 185 190

Thr Ala Glu Asp Leu Lys Glu Gln Lys Gln Leu Val Ala Ser Leu Asn
195 200 205

Lys Asp Leu Gln Ala Leu Glu Gln Gln Val Ser Lys Asp Lys Glu Ser
210 215 220

Arg Lys Ser Leu Glu Arg Asp Leu Glu Glu Ala Thr Ile Ser Leu Asp
225 230 235 240

Glu Met Asn Arg Asn Ala Val Ile Leu Ser Gly Glu Leu Gln Arg Ala
245 250 255

Asn Ser Leu Val Ser Ser Leu Glu Lys Glu Lys Asp Val Leu Ile Lys
260 265 270

Ser Leu Thr Asn Gln Arg Asn Ala Cys Lys Glu Ala Gln Asp Asn Ile
275 280 285

Glu Asp Ala His Asn Leu Ile Met Lys Leu Gly Lys Glu Arg Glu Asn
290 295 300

Leu Glu Lys Lys Gly Lys Lys Phe Glu Glu Glu Leu Ala Ser Ala Lys
305 310 315 320

Gly Glu Ile Leu Arg Leu Lys Ser Arg Ile Asn Ser Ser Lys Val Ala
325 330 335

Val Asn Asn Gly Pro Val Gln Lys Asp Gly Gly Glu Lys Lys Val Asn
340 345 350

Pro Ser Lys Val Ala Val Asn Asn Glu Gln Ala Gln Lys Asp Glu Gly
355 360 365

Glu Asn Lys Val Thr Val Ser Ala Arg Lys Thr Val Arg Arg Arg Lys
370 375 380

Ala Asn Pro Gln
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<210> 21
<211> 2019
<212> DNA
<213> Zea mays

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caacctgtga atgattataa tcagaagacc agtggagttg ttgctggaac tccacagcct 1980
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Asp Asn Thr Gln Pro Glu Gly Thr Gln Ala Glu Thr Ile Pro Glu Ala
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Arg Gln Arg Glu Ser Ser Leu Gln Leu Val Gln Glu Gln Pro Pro Glu
35 40 45

Asn Pro Leu Leu Gly Phe Leu Gly Ile Val Gly Val Ala Ala Ser Gly
50 55 60

Val Leu Gly Gly Leu Tyr Gly Thr Ser Leu Gln Glu Glu Lys Ala Leu
65 70 75 80

Gln Ser Ile Val Ser Ser Met Glu Ser Lys Leu Ala Glu Asn Glu Ala
85 90 95

Ala Leu Ser Leu Met Arg Asp Asn Tyr Glu Lys Arg Leu Leu Glu Gln
100 105 110

Gln Ala Ala Gln Lys Lys Gln Ser Met Lys Phe Gln Glu Gln Glu Val
115 120 125

Ser Leu Ser Gly Gln Leu Ala Ser Ala Thr Lys Thr Leu Thr Ser Leu
130 135 140

Ser Glu Glu Phe Arg Lys Glu Lys Lys Leu Ala Glu Glu Leu Arg Asp
145 150 155 160

Glu Ile Gln Arg Leu Glu Ser Ser Ile Thr Gln Ala Gly Ile Asp Asn
165 170 175

Asp Val Leu Glu Thr Lys Leu Glu Glu Lys Leu Gly Glu Ile Asn Phe
180 185 190

Leu Gln Glu Lys Val Ser Leu Leu Asn Gln Glu Ile Asp Asp Lys Glu
195 200 205

Lys His Ile Arg Glu Leu Ser Ala Ser Leu Ser Ser Lys Glu Val Asp
210 215 220

Tyr Gln Lys Leu Thr Ala Phe Thr Asn Gln Thr Lys Lys Ser Leu Glu
225 230 235 240

Leu Ala Asn Ser Arg Val Gln Gln Leu Glu Glu Glu Leu Ser Thr Thr
245 250 255

Lys Asn Ala Leu Val Ser Lys Ile Ser Ser Ile Asp Ser Leu Asn Ala
260 265 270

Lys Leu Glu Thr Leu Asn Ser Glu Lys Lys Lys Leu Thr Lys Lys Ile
275 280 285

Asn Glu Leu Ile Gln Glu Tyr Thr Asp Leu Lys Val Ala Ser Glu Thr
290 295 300

Arg Ala Ser His Asp Ser Lys Leu Leu Ser Glu Arg Asp Asp Leu Ile
305 310 315 320

Lys Gln Leu Glu Glu Lys Leu Ser Val Ala Leu Thr Asp Ser Ser Lys
325 330 335

Asp Gln Glu Thr Ile Val Glu Leu Asn Lys Glu Leu Asp Ala Thr Lys
340 345 350

Met Met Leu Lys Asn Glu Leu Lys Ser Met Glu Ala Leu Lys Asp Ser
355 360 365

Ile Arg Ser Ser Glu Glu Ala Leu Lys Thr Ser Arg Ser Glu Val Ser
370 375 380

Lys Leu Ser Lys Glu Leu Glu Glu Ala Asn Glu Leu Asn Glu Asp Leu
385 390 395 400

Val Ser Gln Ile Ser Lys Leu Arg Glu Glu Ser Asn Glu Met Gln Val
405 410 415

Asp Leu Thr Asn Lys Leu Gly Glu Ala Glu Ser Leu Ser Lys Ala Leu
420 425 430

Ser Glu Asp Leu Ala Ser Val Asn Glu Met Val Gln Lys Gly Gln Glu
435 440 445

Glu Leu Glu Ala Thr Ser Ile Glu Leu Ala Ser Ile Ala Glu Ala Arg
450 455 460

Asp Asn Leu Lys Lys Glu Leu Leu Asp Ala Tyr Lys Asn Leu Glu Ser
465 470 475 480

Thr Thr His Glu Leu Val Glu Glu Arg Lys Ile Val Thr Ala Leu Asn
485 490 495

Lys Glu Leu Glu Ala Leu Ala Lys Gln Leu Gln Val Asp Ser Glu Ala
500 505 510

Arg Lys Ser Leu Glu Ser Asp Leu Glu Glu Ala Thr Lys Ser Leu Asp
515 520 525

Glu Met Asn Asn Ser Ala Leu Leu Leu Ser Lys Glu Leu Glu Ser Thr
530 535 540

His Ser Arg Ser Ala Thr Leu Glu Ser Glu Lys Glu Met Leu Arg Lys
545 550 555 560

Ala Leu Ala Glu Gln Thr Lys Ile Thr Thr Glu Ala Lys Glu Asn Thr
565 570 575

Glu Asp Ala Gln Asn Leu Ile Thr Arg Leu Glu Thr Glu Lys Glu Ser
580 585 590

Phe Glu Leu Arg Cys Arg His Leu Glu Glu Glu Leu Ala Leu Ala Lys
595 600 605

Gly Glu Ile Leu Arg Leu Arg Arg Gln Ile Ser Thr Asn Ser Ser Gln
610 615 620

Lys Pro Arg Ala Arg Gly Pro Pro Glu Ala Ser Glu Thr Leu Lys Glu
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Gln Pro Val Asn Asp Tyr Asn Gln Lys Thr Ser Gly Val Val Ala Gly
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<223> n= g, a, c or t

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tcttatctct aggcttcaga ctgagaagga gagttttgaa atgagggcta gacatcttga 180
agaggagttg gcgttagcaa agggtgagat attgcgccta agaaggcaga ttagtacaag 240
cagatcacag aaagcaaaaa ctcttccaaa cacaaatgca tctccagagg tcagtcaggc 300
tccangacga gcaggctgtg aa 322

<210> 24
<211> 107
<212> PRT
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<220>
<223> X= G or R

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Leu Ser Lys Ala Leu Ala Glu Gln Gln Lys Ile Thr Thr Glu Ala His
20 25 30

Glu Asn Thr Glu Asp Ala Gln Asn Leu Ile Ser Arg Leu Gln Thr Glu
35 40 45

Lys Glu Ser Phe Glu Met Arg Ala Arg His Leu Glu Glu Glu Leu Ala
50 55 60

Leu Ala Lys Gly Glu Ile Leu Arg Leu Arg Arg Gln Ile Ser Thr Ser
65 70 75 80

Arg Ser Gln Lys Ala Lys Thr Leu Pro Asn Thr Asn Ala Ser Pro Glu
85 90 95

Val Ser Gln Ala Pro Xaa Arg Ala Gly Cys Glu
100 105

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<212> DNA
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Primer

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